

ABSTRACT OF THE DISCLOSURE:

A hybrid electric vehicle has a permanent magnet type dynamo-electric machine whose torque during reverse rotation is greater than its maximum torque in forward rotation. The dynamo-electric machine is connected in series with an engine and a drive shaft, and no gear is provided for switching between forward and backward movements. The dynamo-electric machine has a stator with a stator iron core around which a stator coil is wound, and a rotor arranged in the stator at a rotational gap and having a plurality of permanent magnets arranged and fixed within a rotor iron core in a peripheral direction. The ratio between a maximum torque output by the dynamo-electric machine when the dynamo-electric machine normally rotates and a torque output by the dynamo-electric machine when reverse rotating is in the range of 1 : 1.05-1.2, wherein the torque in reverse rotation is greater.